

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Jean-Paul BRIAND et al.

Application No.: 09/889,178

Filed: July 12, 2001

Docket No.: 110072

For: PSEUDOPEPTIDE, SYNTHESIS METHOD, REAGENT AND APPLICATIONS

INFORMATION DISCLOSURE STATEMENT

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.

Respectfully submitted,



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Date: September 19, 2001

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Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 110072		APPLICATION NO. 09/889,178	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANTS Jean-Paul BRIAND et al.			
				FILING DATE July 12, 2001			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
	1	WO 97/18475	05/22/1997	WIPO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
	2	Ostankovitch et al., "A Partially Modified Retro-Inverso Pseudopeptide Modulates the Cytokine Profile of CTL Specific for an Influenza Virus Epitope", Journal of Immunology, 1998, pp. 200-208.					
	3	Briand et al., "A retro-inverso peptide corresponding to the GH loop of foot-and-mouth disease virus elicits high levels of long-lasting protective neutralizing antibodies", Proc. Natl. Acad. Sci, USA, Vol. 94, pp. 12545-12550, November 1997.					
	4	Atwood et al., "PEPTIDE BASED INHIBITORS OF INTERLEUKIN-8: STRUCTURAL SIMPLIFICATION AND ENHANCED POTENCY", Bioorganic & Medicinal Chemistry Letters, Vol. 7, No. 4, pp. 429-432, 1997.					
	5	Hermanson, "Bioconjugate Techniques", Academic Press, San Diego, 1996					
	6	Stemmer et al., "Protection against Lymphocytic Choriomeningitis Virus Infection Induced by a Reduced Peptide Bond Analogue of the H-2D ^b -restricted CD8 ⁺ T Cell Epitope GP33", The Journal of Biological Chemistry, Vol. 274, No. 9, February 26, 1999, pp. 5550-5556.					
	7	Fehrentz et al., "An Efficient Synthesis of Optically Active α -(t-Butoxycarbonylamino)-aldehydes from α -Amino Acids, Synthesis, 1983, pp. 676-678.					
	8	Lloyd-Williams et al., "CHEMICAL APPROACHES to the SYNTHESIS of PEPTIDES and PROTEINS", CRC press, Boca Raton, 1997.					
	9	Osmanov, "Report of a WHO workshop on synthetic peptides in HIV diagnosis and AIDS-related research, Moscow 24-26 May 1989", AIDS 1991, 5:WHO1-WHO9.					
	10	Fujii et al., "Trimethylsilyl Trifluoromethanesulphonate as a Useful Deprotecting Reagent in Both Solution and Solid Phase Peptide Syntheses", J. Chem. Soc., Chem. Commun., 1987, pp. 274-275.					
	11	Gante, Sythesis, pp. 405-413, 1989.					
EXAMINER					DATE CONSIDERED		
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

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	12	Rammensee, "Chemistry of peptides associated with MHC class I and class II molecules", Current Opinion in immunology 1995, 7:85-96, Current Biology LTD.					
	13	Han et al., "JOURNAL OF THE AMERICAN CHEMICAL SOCIETY", Vol. 118, No. 11, March 20, 1996.					
	14	Hutchins et al., "A Strategy for Urea Linked Diamine Libraries", Tetrahedron Letters, Vol. 36, No. 15, pp. 2583-2586, 1995.					
	15	Camarero et al., "Chemical ligation of unprotected peptides directly from a solid support", Journal of Peptide Research, Vol. 51, 1998, pp. 303-316.					
	16	King et al., "A cleavage method which minimizes side reactions following Fmoc solid phase peptide synthesis", Journal of Peptide Protein Research", Vol. 36, 1990, pp. 255-266.					
	17	Limal et al., "Solid-phase synthesis and on-resin cyclization of a disulfide bond peptide and lactam analogues corresponding to the major antigenic site of HIV gp41 protein", Journal of Peptide Research, Vol. 52, 1998, pp. 121-129.					
	18	Limal et al., "Direct synthesis of N-protected B-amino dimethylhydroxamates: Application to the solid-phase synthesis of a peptide incorporating a new amide bond surrogate [CH ₂ CH ₂ NH]", Tetrahedron Letters, Vol. 39, 1998, pp. 4239-4242.					
	19	Regenmortel, "TRANSCENDING THE STRUCTURALIST PARADIGM IN IMMUNOLOGY - AFFINITY AND BIOLOGICAL ACTIVITY RATHER THAN PURELY STRUCTURAL CONSIDERATIONS SHOULD GUIDE THE DESIGN OF SYNTHETIC PEPTIDE EPITOPES", Proteins & Nucleic Acids, Vol. 1, 1995, pp. 109-116.					
	20	Regenmortel, "STRUCTURAL AND FUNCTIONAL APPROACHES TO THE STUDY OF PROTEIN ANTIGENICITY", Immunology Today, Vol. 10, No. 8, 1989, pp. 266-271.					
	21	Majer et al., "A Safe and Efficient Method for Preparation of N,N'-Unsymmetrically Disubstituted Ureas Utilizing Triphosegen", J. Org. Chem., 1994, Vol. 59, pp. 1937-1938.					
	22	Mendre et al., "Pharmacological activity of cholecystokinin analogues modified in the Met ²⁸ -Gly ²⁹ region, European Journal of Pharmacology, Vol. 186, 1990, pp. 213-222.					
	23	Aichele et al., "T Cell Priming Versus T Cell Tolerance Induced by Synthetic Peptides", J. Exp. Med. Vol. 182, July 1995, pp. 261-266.					
	24	Perrin et al., "PURIFICATION OF LABORATORY CHEMICALS", 2 nd edition, Pergamon Press, Oxford.					
	25	Quibell et al., "Synthesis of Azapeptides by the Fmoc/tert-Butyl/Polyamide Technique", J. Chem. Soc., Perkin Trans., I 1993					
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
	26	Calbo et al., "Role of Peptide Backbone in T Cell Recognition", Journal of Immunology", 1999, 162: 4657.					
	27	Tourdot et al., "Chimeric Peptides: A New Approach to Enhancing the Immunogenicity of Peptides with Low MHC Class I Affinity: Application in Antiviral Vaccination", Journal of Immunology, 1997, 159: 2391.					
	28	Grant, "Synthetic Peptides", WH Freeman and Company, New York, 1992.					
	29	Greene et al., "PROTECTIVE GROUPS IN ORGANIC SYNTHESIS", second edition, John Wiley & Sons, New York 1991.					
	30	Bodanszky et al., "The Practice of Peptide Synthesis", Springer Verlag, Berlin, 1984.					
	31	Lu et al., "Total chemical synthesis of bovine pancreatic trypsin inhibitor by native chemical ligation", FEBS Letters, 429, pp. 31-35, 1998.					
	32	Wong, "Chemistry of Protein Conjugation and Cross-Linking", CRC Press, Boca Raton, 1991.					
	33	Zhang et al., "Formation of Urea Dipeptides from Carbonyldiimidazole: Application toward the Protease Inhibitors GE 20372 and MAPI, J. Org. Chem., 1997, Vol. 62, pp. 6420-6423.					
	34	Takeda et al., "Convenient Methods for Syntheses of Active Carbamates, Ureas and Nitrosoureas Using N,N'-disuccinimido Carbonate (DSC) ¹⁾ , Tetrahedron Letters, Vol. 24, No. 42, pp. 4569-4572, 1983.					
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